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ABSTRACT

Using Festinger's theory of cognitive dissonance as a model, this study attempted to change the attitude and behavior of children toward well liked toys. The results offer only limited support for the theory. The subjects in the three groups did play a significantly different amount of time in the two play periods. The t-tests indicated it was the children who received the mild threat who were playing differentially. They played less in the Post play period and most in the Final play period. This study does not support Freedman's (1965) findings of the effects being maintained across time. These results indicate that the effects of not playing initially are at least partially compensated for later. The results of this study though tending to support the theory of cognitive dissonance for short-term behavior change raise doubts about generalizing the positive results of published studies to populations that have not been investigated. It further indicates that more careful empirical study should be given the nature of threats and toys selected, for use in studies of this kind. Finally, this study warrants the conclusion that studies of dimensions as complex as attempted attitude and behavior change in young children require the utmost precision and preliminary research to rule out other factors which may effect results in an unascertained manner. (Author/KJ)

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USE OF COGNITIVE DISSONANCE TO PRODUCE CHANGES IN THE ATTITUDES AND BEHAVIOR OF ECONOMICALLY DISADVANTAGED FIRST GRADE CHILDREN

by

Teresa Martin Leonhardt

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INTRODUCTION

Perhaps one of the most intriguing aspects of Festinger's theory of cognitive dissonance is its application to understanding the socialization process. One might use mild threat of punishment or minimal reward to produce desirable changes in attitudes and behavior of children.

The theory of cognitive dissonance maintains that if a person complies with an unliked or unaccustomed situation because of mild threat or minimal reward, he will experience dissonance. The person is holding dissonant cognitions: he did not want to accept this situation, yet he did so because of an insignificant threat (or reward). He will think that the mild threat (or reward) was not sufficient to warrant compliance. According to the theory, dissonance is a negative motivational state. The resulting pressures to reduce dissonance are manifested in behavioral changes or cognitive changes which make the person's cognitions consonant again.

Let us consider the implications for childrearing. For example, one should use only a mild threat or a small reward to persuade a child to eat his broccoli. If the child complies, he will hold two dissonant cognitions. He does not like broccoli, yet he has just eaten it. He should feel that the threat or reward was not sufficient to justify his eating that food: he must, therefore, have wanted to eat it. Since he could not change his behavior, he would change his opinion and decide that he liked broccoli. He thereby makes his cognitions consonant again.

Aronson and Carlsmith (1963) reported a study in which preschool children received and complied with two severity levels of threat not to play with a toy which they had previously rated as attractive. The subjects who received the mild threat subsequently rated the toy lower than the comparable group who had received a stronger warning. The interpretation was that the mild group experienced dissonance because the threat was not sufficient to warrant compliance. To reduce the dissonance, they decided they did not like the toy so well after all. Turner and Wright (1965) also reported positive results in a similar study with preschool children. In a study of essentially the same design, Freedman (1965), using children from grades two through four, obtained positive results. His results were still evident more than a month after the threat, in less play by the group which received the mild threat.

All of these studies, however, made the assumption without empirical evidence that both threats were of the same essential nature, and that one threat was milder than the other.* Severity of threat was determined by the experimenter's judgment. Children's perceptions of severity could possibly have been different.

A further criticism of these studies is that the authors did not consider the possibility that they were using different kinds as well as different levels of threat. Whiting and Child (1953) delineated two kinds of punishment that have different effects on child behavior and Sears, Maccoby and Levine (1957) tested the theory with preschool

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*Pepitone, McCauley, and Hammon (1967) reported a study in which they circumvented this problem by using threats to take away valuable (strong) or less valuable (mild) gifts to their subjects. Their study was published after the present study was underway.

children. One kind of punishment is non-love oriented; it consists of a high use of tangible rewards, deprivation of privileges, ridicule and physical punishment. The love oriented technique consists of high use of praise, isolation, withdrawal of love, and reasoning.

Many people (MacKinnon, 1938; Sears, Maccoby, and Levine, 1957; Child, 1954; Glueck and Glueck, 1950) have investigated the aspects and consequences of these two types of punishment. Jones and Gerard (1967) conclude that the extent of guilt which a person feels should correlate with the extent of use of love oriented versus physical techniques of punishment toward him. Other factors such as a child's willingness to comply with a disciplinary technique to which he is unaccustomed, or the difference in a child's perception of the situation under one technique of punishment as opposed to another, have not been investigated. It seems conceivable, however, that these distinct types of punishment or threats of punishment might produce differential effects in the kinds of studies discussed here.

The threats used by Aronson and Carlsmith (1963) confound the love versus non-love oriented dimension with the severity dimension. Their mild threat, "I would be annoyed," is clearly love oriented. Their strong threat, " . . . I would be very angry. I would have to take all my toys and go home and never come back again . . . I would think you were just a baby," contains elements of both dimensions. The threats used by Turner and Wright (1965) cut across both love oriented and non-love oriented dimensions also, the mild being love oriented and the strong being non-love oriented. Freedman's (1965) threats are difficult to classify. The mild threat, "Do not play with the robot. It is wrong to play with the robot," is probably non-love oriented. The

" . . . I'll be very angry . . . " makes this threat a mixture of the two types.

The present study was proposed in order to take into account these two types of punishments and to establish severity of threat empirically by having children rate the threats. It was further proposed to use economically disadvantaged children as subjects. The published studies do not designate the social class of their populations. The description of their neighborhoods, however, leads one to believe that they are middle to upper middle class. It was felt that if positive results were obtained with economically disadvantaged children, the procedure might prove useful in helping manage school behavior problems from this group.

The study is of the following design: subjects in each of three groups, counterbalanced for race and sex, were tested individually. Three levels of threats were used to discourage children from playing with an attractive toy: no threat, but removing the toy from the room; mild threat and severe threat.

Two measures of dissonance were used: a change in ranking of the forbidden toy and the number of minutes the child played with the forbidden toy when the prohibition was removed. These measures were taken once on the day of original testing and again several weeks later.

METHOD

PRELIMINARY TESTING

Rating of Punishments

Since the effect on children's behavior of love oriented versus non-love oriented punishment techniques is different, a decision was made to investigate only love oriented disciplinary techniques (Sears, Maccoby and Levine, 1957). The punishments to be used as threats in this experiment were established as love oriented by being selected from Dunham (1962). The six punishments thus selected were felt to be used frequently by teachers, and resembled some investigated by Epstein and Komorita (1965).

The six punishments were:

1. I am not proud of you.
2. I do not want you near me.
3. I do not want to talk to a child who does that.
4. I am disappointed in you.
5. I want you to stay alone there.
6. I do not like bad children.

Epstein and Komorita determined severity ratings by children of 31 disciplinary techniques that another group of children had indicated were used by parents. The severity rating was obtained by three five-point semantic differential scales measuring fair-unfair, right-wrong, and good-bad dimensions. This author felt, however, that these dimensions were not yielding a measure of the children's perceived severity. Therefore, five first grade and five second grade Negro and white

children were asked individually to rate each punishment on a three-point scale according to two dimensions, hard on him and easy on him. Subjects were aided in making the rating by use of three 5 x 8 cards on which were drawn one, two, and three circles.

When rating the punishments according to the hard on him dimension, the card with one circle on it represented "a little bit hard on me," the card with two circles represented, "some hard on me," while the card with three circles represented "very hard on me." In rating the easy on him dimension, however, the card with one circle on it represented "a little bit easy on me," the card with two circles represented "some easy on me," and the card with three circles represented "very easy on me."

In order, therefore, to give a punishment a severe rating, the subject had to select the card with three circles in one case, and the card with one circle in the next case. Presentation of the two dimensions was varied systematically. The results of the ratings are presented in Table 1. The larger the mean, the more severe the rating. The total means indicate that children perceive not being liked by the teacher as most severe, and having to stay alone as least severe. Boys and girls seemed to differ in their rating. Boys rated as least severe the teacher's not wanting them near her and as most severe the teacher's being disappointed in them. Girls rated as most severe the teacher's not wanting them near her and not liking them. They rated the teacher's being disappointed in them as least severe.

Table 1

Mean Severity Rating of Punishments

Punishments	Boys	Girls	Total	S. D. Total
1 (Not Proud)	3.8	4.2	4.0	.82
2 (Not Near)	2.6	4.8	3.7	1.42
3 (Not Talk To)	4.4	4.6	4.5	1.08
4 (Disappointed)	4.8	3.8	4.3	1.16
5 (Stay Alone)	3.2	4.6	3.9	1.59
6 (Do Not Like)	4.4	4.8	4.6	1.08
N	5	5	10	10

These findings do appear to conflict somewhat with those of Epstein and Komorita (1965), although direct comparisons are not possible due to differences in wording of punishments. Their subjects rated "Tell child he's not liked" very low in severity. Subjects in the present study rated a teacher's saying, "I do not like bad children" as most severe. Epstein and Komorita's subjects rated "Send child to room" and "Send child to bed" as moderately severe, while these subjects rated a teacher saying, "I want you to stay alone there," and "I do not want you near me," as least severe.

"I am not proud of you," was selected as the mild threat, on the basis that it was rated fairly low by both boys and girls, and that the ratings of this punishment showed the least amount of variability. For the severe punishment, it was decided to combine two punishments that the subjects had rated high and on which there was low variability.

Therefore, punishments 3 and 6 were combined to become the severe threat, "I do not even want to talk to you because I do not like bad children."

Rating of Toys

Since this study involves toys and children's ranking of toys, some initial data was needed on how children would rank toys and on which toys both boys and girls rated high and low in desirability. Ranking by paired choices was obtained on seven toys by the 10 subjects who rated the punishments. Ranking of the toys was carried out during the same session. The seven toys and their mean ranks are presented in Table 2.

Table 2

Mean Desirability* Rating of Toys

Toy	Boys	Girls	Total	S. D. Total
Etch-a-sketch	2.8	2.2	2.5	1.96
Slinky	3.0	3.6	3.3	1.49
Finger Puppets	4.8	2.8	3.8	1.93
Telephone	3.6	5.0	4.3	1.49
Popeye	5.2	4.8	5.0	1.15
State Fair	2.0	3.6	2.8	1.81
Book	6.6	6.0	6.3	1.64

*Low numbers indicate high desirability

The Etch-a-sketch, Slinky, puppets, State Fair (a type of pin ball game), and the book were selected to give a range of toy choices for both boys and girls.

Subjects

Initially 48 culturally disadvantaged children in three racially integrated first grade classes in the same poverty area school were selected as the subjects. The subjects were identified as culturally disadvantaged by their teachers. They were assigned to one of three experimental groups counterbalancing for race and sex. After several days of the study it became apparent that so many Negro girls were ignoring the warning to not play with their forbidden toy and, therefore, being eliminated from the study, that it would be necessary to go to another school in order to complete the design. Since the involvement of another school became necessary, and since there was not another poverty area integrated school with a sufficient number of disadvantaged Negro children, a decision was made to utilize more white children in this first school and to get the other needed subjects from a poverty area all-Negro school. From the two first grade classes in this second school enough subjects were randomly selected and assigned to complete the design. With the addition of subjects the total number was 60 with 20 in each of three conditions. In each group there were five white boys, five white girls, five Negro boys, and five Negro girls.

Equipment

The study was carried out in a mobile experimental laboratory. This laboratory is actually a large camper which has been partitioned

into three experimental rooms. Two of the rooms were utilized for this study. The experimenter administered the treatment in one room while an observer in the other room watched the child and recorded data through a one-way mirror.

Procedure

Initial Toy Ranking and Test Procedure

The experimenter brought each subject to the experimental room individually. The subject was asked to sit on a blanket on the floor. The experimenter sat on the floor also and showed the subject each toy one at a time and allowed the subject to play with each toy for one minute.

The experimenter then paired each toy with every other toy and asked the subject which of the two he would rather play with if he could only play with one of the two toys. There were 10 such comparisons, after which the E counted the number of times each toy was chosen over something else. If any ties had resulted, they were broken so that the child's first, second, third, etc., ranked toy was ascertained. In eight cases, the subject chose in such an inconsistent manner that at the end of the paired choices no ranking had resulted. These subjects were eliminated from the study because of their inability to make consistent choices in the same manner as the other subjects.

For subjects in the mild condition the E then said, "I have left some things I am going to need in my car. I have to go get them. While I am gone you may play with any of the toys except this one (touching the child's second ranked toy). If you play with (named toy), I will

not be proud of you. But you may play with all the toys except (named toy and pointed to it) while I am gone." In the severe condition everything was the same except the warning, which was, "If you play with (named toy), I will not even want to talk to you because I do not like bad children." Everything was the same in the control condition except that no warning was given. The experimenter said, "While I am gone you may play with the toys;" however, she took the subject's second ranked toy with her. The experimenter left the room for five minutes. The observer recorded how many seconds the subject played with each toy out of the 300-second play period.

Post Toy Ranking and Test Procedure

When E returned, she said, "Now I have everything. I want to ask you some more questions." E then had the subject to rank the toys by the same procedure used previously. After the ranking E said, "You may play with all of the toys some more." E then began working intently on some papers so as not to subjectively influence the child's play by her attention. This is more difficult than at first is apparent. Many children sought attention and approval in their play with the toys. E attempted to remain busy and nonattentive at all times. During this second 300-second play period, the observer again recorded the number of seconds the subject played with each toy. This play period will be referred to as Post Play. At the end of the five minutes, the E took the child back to his classroom.

Final Play Period and Test Procedure

Approximately 38 days later (mean number of days was 38.4, range was 22 to 68) each subject was brought to the experimental room by a different experimenter. An attempt was made to make this phase of the study not seem a part of the previous one. The subjects were given a 23-item yes-no questionnaire called the Locus of Control scale (Bialer, 1960). While the experimenter looked over the answers, the subject was asked to play with some toys someone had left in the room. While the children played, an observer recorded the number of seconds of play with each toy. The subjects were allowed to play for five minutes. At the end of this time, the experimenter said, "Let me ask you some questions about the toys." She then obtained each subject's ranking of the toys by the paired-choice method used previously. The subject was then taken back to his classroom. This phase of the study will be referred to as the final play and ranking period.

RESULTS

Toy Rank

Dissonance theory maintains that people placed in a dissonant situation will attempt to reduce their dissonance by changing their attitudes or their behavior. The Mild group should have felt dissonance because they had given up the opportunity to play with an attractive toy simply because of a minor threat by the experimenter. The prediction was that the Mild group would rank the forbidden toy lower, thus indicating that they had changed their mind and no longer liked the toy, thereby reducing their dissonance. The Severe and Control

groups, experiencing no dissonance, would find it unnecessary to rank the toy lower.

Two rankings, Post and Final, of the toys must be evaluated. The initial ranking period established the child's second ranked toy. The Post and Final rankings were rated in terms of change in the ranking position of each child's initially second ranked toy. Table 3 presents these data in terms of no change, increase, and decrease in rank for both the Post and Final rankings. Inspection of the data showed that more subjects in all groups except Control on final check decreased their rank of the toy than increased or did not change their rank. Chi-squares on these data, however, revealed that none of the differences in frequency was significant. The Mild warning subjects, therefore, if placed in dissonance, did not reduce their dissonance by devaluating the toy.

Table 3 also shows the change in rank by race and sex for both Post and Final periods. Apparent trends involving race, sex, or condition are evident. Again, however, no differences were significant except that more girls than boys in all conditions decreased their rank during Post period. This difference was non-significant on Final check.

Play Versus No Play with the Second Ranked Toy

Dissonance theory maintains that reduction of dissonance may be achieved by changing one's attitude or behavior toward the cause of the dissonance. These subjects apparently did not reduce dissonance by changing their attitude toward the toy. However, they may have achieved dissonance reduction by changing their behavior; they may not have played with the toy.

Table 3

Number of Children who Ranked their Initially Second Ranked Toy the Same, Raised (Increase) the Rank, or Decreased the Rank

POST

		Increase			Same			Decrease		
		Negro	White	Total	Negro	White	Total	Negro	White	Total
CONTROL	Boys	2	1	3	1	3	4	2	1	3
	Girls	2	1	3	0	0	0	3	4	7
	Total	4	2	6	1	3	4	5	5	10
MILD	Boys	0	1	1	2	3	5	3	1	4
	Girls	2	0	2	1	0	1	2	5	7
	Total	2	1	3	3	3	6	5	6	11
SEVERE	Boys	0	2	2	3	1	4	2	2	4
	Girls	2	0	2	0	1	1	3	4	7
	Total	2	2	4	3	2	5	5	6	11

FINAL

CONTROL	Boys	3	1	4	1	1	2	1	3	4
	Girls	3	2	5	0	0	0	2	3	5
	Total	6	3	9	1	1	2	3	6	9
MILD	Boys	1	2	3	0	1	1	3	2	5
	Girls	3	0	3	0	2	2	1	3	4
	Total	4	2	6	0	3	3	4	5	9
SEVERE	Boys	1	0	1	3	1	4	1	4	5
	Girls	1	1	2	2	1	3	1	2	3
	Total	2	1	3	5	2	7	2	6	8

Table 4 shows the number of subjects in each group who played and who did not play with their second ranked toy on Post check. While only three of the subjects in the Control group did not play with their second ranked toy, 17 of the Mild group did not and 13 of the Severe group did not.

Table 4

Number of Subjects Who Played and
Did Not Play with Second Ranked Toy

POST TEST

	Play	No Play	
Control	14	6	
Mild	3	17	
Severe	7	13	$\chi^2 = 12.913$ df = 2 $p < .01$

FINAL TEST

	Play	No Play	
Control	16	4	
Mild	13	6	
Severe	12	7	$\chi^2 = 1.405$ df = 2

Comparison of the Control and Mild subjects who played and who did not play yielded a significant chi-square of 10.23 ($p < .01$). The comparison of Control and Severe and of Mild and Severe was insignificant. This latter comparison is the crucial one for the dissonance hypothesis. Not only must more subjects in the Mild group than in the Control not play with the toy, but also more subjects in the Mild group than in the Severe group must not play. The results are in the predicted direction, but not statistically significant.

Table 4 also shows the number of subjects in each group who played and who did not play on Final check. The majority of subjects in all groups played with the second ranked toy on Final check. None of the differences between groups are significant, however. Chi-squares on race and sex for both Post and Final periods were insignificant.

To add another dimension of comparison and control, play with the first and third ranked toy was evaluated. Tables 5 and 6 present this data. More subjects in all groups and during both play periods played with both toys than did not play with them. The differences between groups were not significant.

Number of Seconds of Play with Second Ranked Toy

Another way in which the Mild group might have reduced dissonance in this study by changing their behavior was by playing less with the second ranked toy. Figure 1 shows the mean number of seconds of play with the second ranked toy for the three groups during each play period. Visual inspection indicates that the Mild group played less than either

Table 5

Number of Subjects Who Played and

Did Not Play with the First Ranked Toy

POST TEST

	Play	No Play	
Control	12	8	
Mild	14	6	
Severe	16	4	$\chi^2 = 1.906$ df = 2

FINAL TEST

	Play	No Play	
Control	17	3	
Mild	10	9	
Severe	13	6	$\chi^2 = 4.758$ df = 2

Table 6

Number of Subjects Who Played and

Did Not Play with the Third Ranked Toy

POST TEST

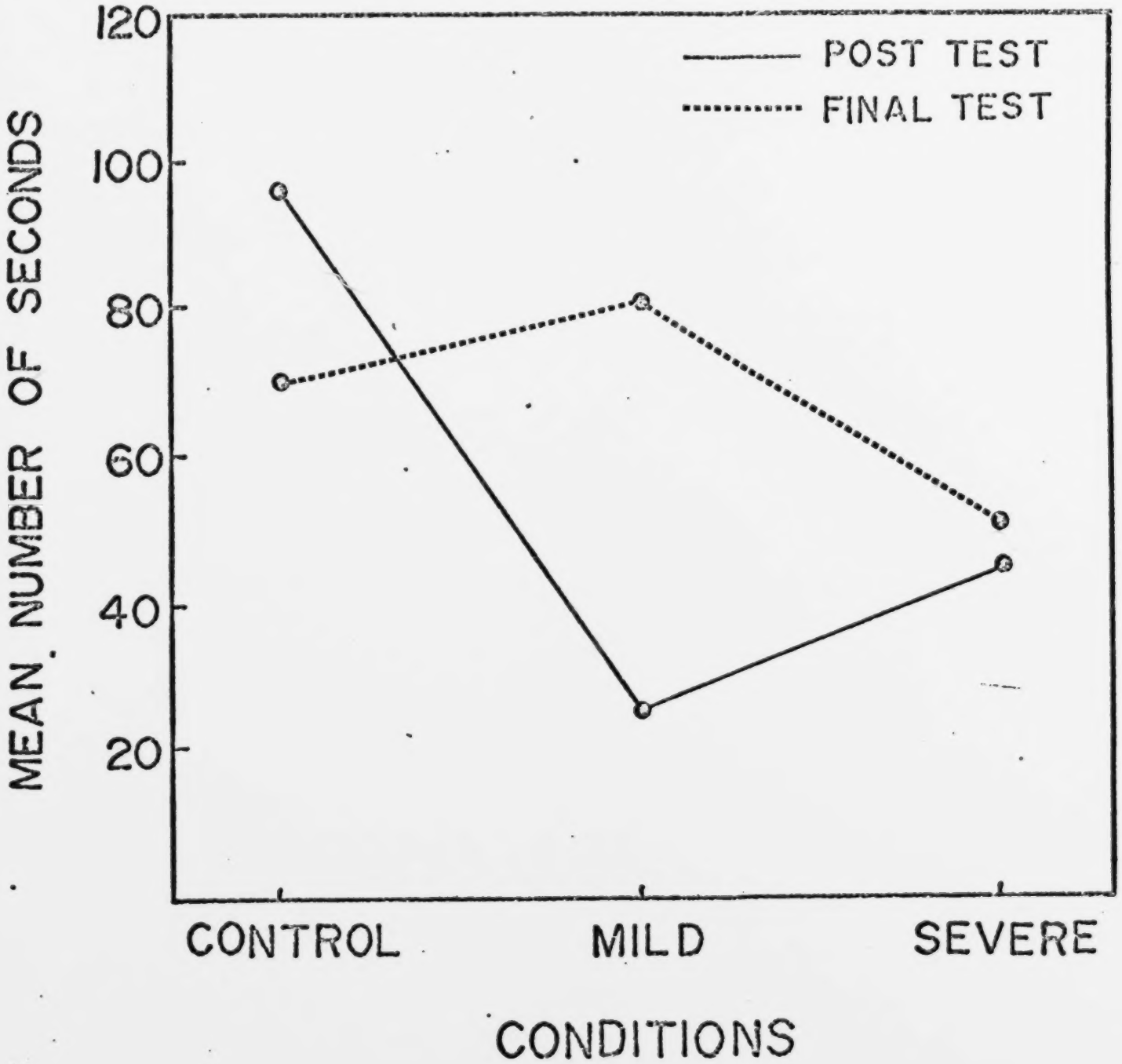
	Play	No Play	
Control	12	8	
Mild	10	10	
Severe	12	8	$\chi^2 = .542$

FINAL TEST

	Play	No Play	
Control	14	6	
Mild	11	8	
Severe	14	5	$\chi^2 = 1.203$

FIGURE 1

AMOUNT OF PLAY WITH SECOND RANKED TOY DURING TWO TEST PERIODS UNDER THREE CONDITIONS OF THREAT



of the other groups during the Post period. During the Final play period, however, the Mild group played slightly more than the Control or Severe.

Initial plans for these data were two 2 x 2 x 3 analyses of variance on the number of seconds of play. This was not feasible, however, due to the large number of zeroes in the distribution. (Note that in the Mild group on Post check 17 of the subjects did not play with the toy at all.) Such a discontinuous distribution affects the analysis in a biasing manner (Ray, 1960).

In order to normalize the distribution and, therefore, make it appropriate for an analysis of variance technique the number of seconds of play during Post period and Final period were in one case added and in the other subtracted. Adding the two play periods afforded the opportunity of analyzing the effects of the treatments over time. Subtracting the number of seconds of play of the two play periods allowed an analysis of the interaction. That is, this analysis tested the difference between number of seconds of play in Post period and number of seconds of play in Final period.

Tables 7 and 8 present the results of these two analyses of variance. The analysis of the added scores (Table 8) was not significant, indicating that over time the groups played with the second ranked toy approximately the same number of seconds. Therefore, if dissonance produced any effects, it was not maintained over time.

Table 7

Analysis of Variance of Interaction
(Subtracted Scores)

Source	df	MS	F
Treatments	2	32710.1	4.414*
Error	55	7410.5	

*$p < .05$

Table 8

Analysis of Variance of Combined Play
(Added Scores)

Source	df	MS	F
Treatments	2	26921.65	1.406
Experimental Error	55	19151.61	

Analysis of the subtracted scores (Table 7) yielded a F significant at the .05 level, indicating that the three groups played differentially in the two periods. To further analyze these results two t-tests were done. One compared Control and Severe; the difference between these two groups was not significant. This indicates that the difference between Post and Final for these two groups in number of seconds of play was the same. The other t-test compared the difference between the means of the Mild group and other two groups (Control and Severe) combined. That difference was significant at the .01 level.

DISCUSSION

The lack of significance in attitude change is a surprising result considering the published studies which report such a finding. The immediate question which comes to mind is, did the experimental manipulations of the study fail to induce dissonance in these children. Unfortunately, the design of the study called for a long-term attitude and behavior check, thereby prohibiting the possibility of asking for an introspective account of the subject's feelings toward the threatened toy. This might have given valuable insight into the difference between results in this study and previous studies.

One factor which conceivably worked toward rendering the results insignificant was the difficulty these children experienced in making consistent choices among the toys. As mentioned earlier seven children were so inconsistent in their choices that they were eliminated from the study. The seven were so inconsistent that after the paired comparisons had been done, no ranking of the toys had occurred. In addition, 44 subjects had a three-way tie on one or more of the ranking periods. These ties were broken before continuing with the experimental procedure, but they serve to point out the obvious difficulty the children experienced in making choices. Conceivably the preliminary check on ranking of the toys was not extensive enough, and the toys were too close in relative attractiveness. Aronson and Carlsmith (1963) and Turner and Wright (1965), however, used toys that they felt were essentially equal in attractiveness. Turner and Wright (1965) indicated that one toy was less attractive than the remaining four. They reported no inconsistent choices among the toys. Three children in the Aronson and Carlsmith (1963) study were

eliminated for inconsistent choices. The subjects in these studies do not appear, however, to have experienced the difficulty in making choices between relatively equally attractive toys that the subjects in the present study did.

Another possible cause of the large number of inconsistent choices is that these economically disadvantaged subjects have not had experience in making choices and decisions. This possibility obviously opens an entirely new question for research. It is perhaps plausible to assume that all these factors: no dissonance induced, toys equally attractive, and difficulty of economically disadvantaged children in making choices contributed to the lack of significant attitude change.

The play versus no play after removal of prohibitions results again offer no significant support for the theory of cognitive dissonance. The finding that significantly more subjects in the Control group than in the Mild and Severe group played merely indicates that the threats did affect the subjects' later play with the toys. In order to support the dissonance theory significantly more children in the Severe threat condition than in the Mild threat condition should have played with the toy once the prohibition was removed. More Severe threat condition children did play, but not significantly more.

There is some evidence to indicate that the subjects in this study were relatively unaffected by the threats. Eleven children had to be eliminated from the study because they played with the toy. Freedman (1965) had four subjects who played; Aronson and Carlsmith (1963), none; and Turner and Wright (1965), one. The threats in the present study were also less effective in retarding transgressions. This difference could be accounted for in less effective deliverance of the threats, in

some essential difference in the populations of children under study, or in merely less effective threats. It must be remembered, however, that the threats were selected by being rated as Severe and Mild by economically disadvantaged children. All of the threats, however, were love oriented. Perhaps the parents of this population of children use predominantly non-love oriented or physical means of punishment.

Another interpretation of these results and those of similar studies deserves consideration. As already pointed out the threats used by published studies confound the love oriented versus non-love oriented dimension with severity. In an attempt to control this factor, the present study used only love oriented threats. The results of this study and the other published ones can be interpreted to show that initially love oriented threats work better than non-love oriented ones in the absence of the threatener. In the present study both the mild and severe threats worked well in the form of no play. Aronson and Carlsmith (1963), Turner and Wright (1965), and Freedman's (1965) love oriented threat - mild threat - worked well also. The fact that Freedman's (1965) results were maintained across time in contrast to the results of this study may reflect class differences in the two samples of subjects.

The present study does not allow an easy, uncomplicated interpretation of its results in relation to those of published studies. Several factors - dissonance, type of threat, and social class - may be operating or interacting to influence the results. A study using mild and severe non-love oriented threats on the same population of subjects would help to clarify these factors.

SUMMARY

Using Festinger's theory of cognitive dissonance as a model, this study attempted to change the attitude and behavior of children toward well liked toys. The results offer only limited support for the theory. No significant changes in attitude were effected by the experimental manipulations. Some support for behavioral change was evident. The subjects in the three groups did play a significantly different amount of time in the two play periods. The t-tests indicated it was the children who received the mild threat who were playing differentially. They played less in the Post or first play period and most in the Final play period.

This study does not support Freedman's (1965) finding of the effects being maintained across time. These results indicate that the effects of not playing initially are at least partially compensated for later.

The results of this study though tending to support the theory of cognitive dissonance for short-term behavior change raise doubts about generalizing the positive results of published studies to populations that have not been investigated. It further indicates that more careful empirical study should be given the nature of threats and toys selected for use in studies of this kind. Finally, this study warrants the conclusion that studies of dimensions as complex as attempted attitude and behavior change in young children require the utmost precision and preliminary research to rule out other factors which may effect results in an unascertained manner.

BIBLIOGRAPHY

Aronson, Elliot, and Carlsmith, J. Merrill. Effect of the severity of threat on the devaluation of forbidden behavior. Journal of Abnormal and Social Psychology, 1963, 66, 584-588.

Bialer, Irving. Conceptualization of success and failure in mentally retarded and normal children. Unpublished doctoral dissertation, George Peabody College for Teachers. August, 1960.

Child, I. L. Socialization. In G. Lindzey (Ed.), Handbook of Social Psychology. Vol. II. Cambridge, Mass: Addison-Wesley, 1954. pp. 655-692.

Dunham, Frances Y. The effect of verbal and material flattery on the performance of girls differing in reported extent of maternal love-oriented discipline. Unpublished doctoral dissertation, Duke University Library, 1962.

Epstein, Ralph, and Komorita, S. S. The development of a scale of parental punitiveness toward aggression. Child Development, 1965, 36, 130-142.

Festinger, Leon. A Theory of Cognitive Dissonance. Illinois: Row, Peterson, & Company, 1957.

Freedman, Jonathan L. Long-term effects of cognitive dissonance. Journal of Experimental Social Psychology, 1965, 1, 145-155.

Glueck, S., and Glueck, Eleanor. Unraveling Juvenile Delinquency. New York: Commonwealth Fund, 1950.

Jones, E. E., and Gerard, H. B. Foundations of Social Psychology. New York: John Wiley & Sons, Inc., 1967.

MacKinnon, D. W. Violations of prohibition. In H. A. Murray et al., Explorations in Personality. New York: Oxford University, 1938.

Pepitone, Albert, McCauley, Clark, and Hammond, P. Change in attractiveness of forbidden toys as a function of severity of threat. Journal of Experimental Social Psychology, 1967, 3, 221-229.

Ray, William S. An Introduction to Experimental Design. New York: MacMillan Company, 1960.

Sears, Robert, Macoby, Eleanor, E., and Levin, H. Patterns of Child Rearing. Evanston, Illinois: Row, Peterson, & Company, 1957.

Turner, Elizabeth A., and Wright, John C. Effects of severity of threat and perceived availability on the attractiveness of objects. Journal of Personality and Social Psychology, 1965, 2, 128-132.

Whiting, John, and Child, Irvin. Child Training and Personality. New Haven: Yale University Press, 1963.